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3.—*Earthquake Wave observed at Samoa, Navigator's Islands, on the day of the Earthquake in Equador, 1868. By the Rev. Dr. GEORGE TURNER.*

(Communicated by W. LOGAN, Esq.)

EARLY on the morning of Saturday, the 15th of August, 1868, an unusual oscillation of the ocean made its appearance along the north side of Upolu. About 2 A.M. during fine weather and in a perfect calm, and at the time of high water, first one, and then a second and higher wave came rolling in. Just at this place, and at similar projective points well protected by the outer barrier reefs, the perpendicular height of the largest wave did not exceed 2 feet 9 inches above the level of high-water mark. But in some of the deep bays and narrow inlets less protected, where it concentrated and raised the shallower waters in its course, it rose to an immense body of water 20 to 30 feet high, and burst in upon the villages, like an invading army, as a native described it, carrying everything before it. In one place, where the roofs of houses were lifted on to the tops of breadfruit-trees 25 feet high, the poor terror-stricken people woke up in the dark, with boxes, bedding, &c., flying about in all directions—the house over their heads carried away altogether or tumbling down about them—and themselves being carried they knew not whither. Some found themselves up among the leaves of the coco-nut trees, and there they held on and swung for a time, others were rolled about and washed away to the taro swamp behind the settlement, and one poor woman with a child at the breast, another in her other arm, and a third on her shoulders holding on by her hair, was thrown up among the thorny branches of an orange-tree. In her struggle to get clear she lost two of her children, and only saved the one who held on by her hair. In two of the villages in that bay only two houses were left standing, and four children were drowned. In another settlement, ten miles further to the east of that place, fourteen houses were carried away, and goods and chattels scattered all over the land and up and down the lagoon. The poor people, and especially the teachers, principally mourn over the loss of their books.

The swell soon subsided, but for hours during the morning and early part of the day a slight oscillation was observed, and between 9 and 11 A.M. there was a distinct rise and fall of the tide eighteen times. No unusual colour or odour was observed here; but, about 40 miles to the eastward, the natives say that the waves dashed on the shore at early dawn with an unusual bloody colour. The swell came from the west and seemed to go eastward, at the rate of about 30 miles an hour.

The oldest natives do not remember anything so sudden and alarming. They remember a similar one in November, 1837, but that was in the daytime, and the people were awake and had time to get out of the way and prevent loss of life. Subsequently, it appeared that on the same day there was a distinctive earthquake along part of the west coast of America, and contemporary with it, a wave, 20 feet high in some places, burst in on the Sandwich Island coast and did a deal of mischief. On the 29th September, 1849, slight oscillation was again observed here and in the New Hebrides group, but nothing of the kind has been noticed since. We have noted the 15th of last month, and expect to hear of some submarine disturbance having its centre somewhere between this and Tonga or Feejee.

Sept. 14, 1868.

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